

**WHAT IS CLAIMED IS:**

1. A method in a data processing system having a program, the method comprising the steps of:

- 5 providing a first processing engine to determine a solution to a problem, wherein the first processing engine subscribes to at least one of a plurality of datatypes that each contains a reference to a respective data item maintained separately from the plurality of datatypes, executes a processing using the data item responsive to receiving the subscribed to datatype, and publishes a processing result including a second datatype; and
- 10 providing a second processing engine that subscribes to the second datatype published by the first processing engine.

2. The method of claim 1, further comprising the step of:  
retrieving a copy of the data item after receiving the datatype.

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3. The method of claim 1, further comprising the step of:  
saving the second datatype responsive to publishing the second datatype.

20 4. A computer-readable medium containing instructions that cause a program in a data processing medium to perform a method comprising the steps of:

- 25 providing a first processing engine to determine a solution to a problem, wherein the first processing engine subscribes to at least one of a plurality of datatypes that each contains a reference to a respective data item maintained separately from the plurality of datatypes, executes a processing using the data item responsive to receiving the subscribed to datatype, and publishes a processing result including a second datatype; and

providing a second processing engine that subscribes to the second datatype published by the first processing engine.

- 30 5. The computer-readable medium of claim 4, further comprising the step of:  
retrieving a copy of the data item after receiving the datatype.

6. The computer-readable medium of claim 4, further comprising the step of:  
saving the second datatype responsive to publishing the second datatype.

7. A data processing system comprising:

a memory having a program that provides a first processing engine to determine a solution to a problem, wherein the first processing engine subscribes to at least one of a plurality of datatypes that each contains a reference to a respective data item maintained separately from the plurality of datatypes, executes a processing using the data item responsive to receiving the subscribed to datatype, and publishes a processing result including a second datatype, and provides a second processing engine that subscribes to the second datatype published by the first processing engine; and

a processing unit that runs the program.

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8. A data processing system comprising:

means for providing a first processing engine to determine a solution to a problem, wherein the first processing engine subscribes to at least one of a plurality of datatypes that each contains a reference to a respective data item maintained separately from the plurality of datatypes, executes a processing using the data item responsive to receiving the subscribed to datatype, and publishes a processing result including a second datatype; and

means for providing a second processing engine that subscribes to the second datatype published by the first processing engine.

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